CLAIMS

What is claimed:

1. A system for providing focus control in a multi-layer optical storage medium, comprising:

a light source that generates a beam of light;

an optical disk having a first and a second optical layer, the optical disk reflects the beam of light off one of said first and said second optical layers;

a detector for receiving the reflected beam;

a controller circuit coupled to the detector, said control circuit to provide a servo signal in response to said reflected beam; and

a driver circuit coupled to said controller circuit and said light source, said driver circuit to direct said light source to move from a first position to a second position based on said servo signal, so as to focus said light source from one of said first or said second optical layer to another one of said first or said second optical layer.

2. The system as recited in Claim 1, further comprising a conditioning circuit coupled between said detector and said controller, said conditioning circuit to provide a focus signal to said controller circuit based on said reflected beam.

3. The system as recited in Claim 2, further comprising a gain circuit and a hold circuit, said gain circuit to provide an output signal representing

current servo information and said hold circuit to provide an output signal representing predetermined servo information, wherein said controller selects one of said output signals as said servo signal based on said focus signal.

4. The system as recited in Claim 3, further comprising a storage coupled to said controller, said storage containing values for providing said predetermined servo information.

5. The system as recited in Claim 4, wherein said values include a first predetermined value corresponding to a previously current servo value, a second predetermined value corresponding to an amount of voltage required to drive said light source from said first position to said second position, and a third value corresponding to a reverse of said second predetermined value.

6. The system as recited in Claim 5, wherein said first value is provided when said controller determines that a process to move said light source from said first position to said second position is initiated.

7. The system as recited in Claim 5, wherein said second value is provided when said controller determines that focus is progressing from said first layer to said second layer.

8. The system as recited in Claim 5, wherein said third value is provided when said controller determines that said light source is not focused on said first layer.

9. The system as recited in Claim 5, wherein said first value is provided when said controller determines that said light source is focusing on said second layer.

10. The system as recited in Claim 9, wherein said output signal from said gain circuit is provided when said light source is focused on said second layer.

11. A method for providing focus control in a multi-layer optical storage medium, comprising:

generating a beam of light;

reflecting said beam of light off one of a first and a second optical layers on a disk;

detecting the reflected beam;

providing a servo signal in response to said reflected beam; and

directing said light source to move from a first position to a second position based on said servo signal, so as to focus said light source from one of said first or said second optical layer to another one of said first or said second optical layer.

12. The method as recited in Claim 11, further providing a focus signal to said controller circuit based on said reflected beam.

13. The method as recited in Claim 12, further comprising providing one of an output signal representing current servo information or an output signal representing predetermined servo information, said output signal provided as said servo signal in response to said focus signal.

14. The method as recited in Claim 13,further comprising storing values for providing said predetermined servo information.

15. The method as recited in Claim 14, wherein said values include a first predetermined value corresponding to a previously current servo value, a second predetermined value corresponding to an amount of voltage required to drive said light source from said first position to said second position, and a third value corresponding to a reverse of said second predetermined value.

16. The method as recited in Claim 15, wherein said first value is provided when said controller determines that a process to move said light source from said first position to said second position is initiated.

17. The method as recited in Claim 15, wherein said second value is provided when said controller determines that focus is progressing from said first layer to said second layer.

18. The method as recited in Claim 15, wherein said third value is provided when said controller determines that said light source is not focused on said first layer.

19. The method as recited in Claim 15, wherein said first value is provided when said controller determines that said light source is focusing on said second layer.

20. The method as recited in Claim 19, wherein said output signal representing current servo information is provided when said light source is focused on said second layer.